# Optical Module v4



## Overview

PROFIBUS OLM/G12 V4.0 PROFIBUS OLM/G12 V4.0 Optical Link Module with 1 RS 485 and 2 glass FOC interfaces (4 BFOC sockets) for standard Distances up to 2850.

## Key Takeaways

Optical Module V4 refers to the fourth generation of optical modules, typically indicating an updated electrical interface standard, higher data rates, and improved performance in fiber-optic communication systems.

### Overview of Optical Modules

An optical module is a hot-pluggable transceiver used in fiber-optic communication to convert electrical signals into optical signals and vice versa, operating at the physical layer of the OSI model. It usually consists of: TOSA (Transmitter Optical Sub-Assembly): Converts electrical signals into optical signals using a laser diode or LED.

### ROS

A (Receiver Optical Sub-Assembly): Converts incoming optical signals back into electrical signals using a photodetector. Functional circuits and driver chips: Process signals for transmission and reception. Optical and electrical interfaces: Connect the module to the fiber network and the host system.

Optical modules are essential for high-bandwidth data communications and are widely used in networking equipment such as switches, routers, and servers. What "V4" MeansThe "V4" designation generally refers to the fourth version or generation of the module's electrical interface standard. Over time, optical modules have evolved from analog NRZ interfaces to retimed digital interfaces, with each version improving: Data rates: Supporting higher bit rates for faster transmission.

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Signal integrity: Reducing jitter and improving error performance. Compatibility: Aligning with multi-source agreements (MSAs) and industry standards like the Common Electrical Interface (CEI) defined by the Optical Internetworking Forum (OIF),. Power efficiency and thermal performance: Optimizing energy consumption and heat dissipation.

For example, earlier versions (V1–V3) might support lower speeds or simpler electrical signaling, while V4 modules are designed for modern high-speed networks, often supporting 25G, 50G, or 100G Ethernet links.

### Practical Implications

Using a V4 optical module ensures: Compatibility with the latest high-speed network equipment. Improved reliability and signal quality over longer distances. Support for advanced features like forward error correction (FEC) and enhanced monitoring.

In summary, V4 indicates a modern, high-performance generation of optical modules, reflecting improvements in electrical interface standards, data throughput, and overall efficiency in fiber-optic communication systems.

## Article Content

PROFIBUS OLM/G12 V4.0

6GK1503-3CB00 PROFIBUS OLM/G12 V4.0 PROFIBUS OLM/G12 V4.0 Optical Link Module with 1 RS 485 and 2 glass FOC interfaces (4 BFOC sockets) for standard Distances up to 2850 m, with

Product Details

PROFIBUS OLM/G12 V4.0 Optical Link Module with 1 RS 485 and 2 glass FOC interfaces (4 BFOC sockets) for standard Distances up to 2850 m, with signaling contact and measuring output.

Siemens OLM/G12 V4.0 Operating Instructions Manual

PROFIBUS OLMs are designed for use in optical PROFIBUS fieldbus networks. They allow the conversion of electrical PROFIBUS interfaces (RS-485 level) into

Siemens SIMATIC NET OLM V4.0 & V4.1 | PROFIBUS

Complete selection guide for Siemens SIMATIC NET OLM V4.0 and V4.1 series. Compare order numbers for G11, G12, P11, and P12 modules. Find the right

Data sheet 6GK1503-3CB00

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Data sheet 6GK1503-3CB00 Product type designation PROFIBUS OLM/G12 V4.0 PROFIBUS OLM/G12 V4.0 OPTICAL LINK MODULE W. 1 RS485 AND 2 GLASS-FOC-INTERFACES (4 BFOC

Siemens OLM P11 V4.0, OLM P12 V4.0, OLM G11 V4.0, OLM G12 V4

Siemens OLM V4.0 series operation manual provides detailed instructions on installation, configuration and maintenance of optical link modules. Learn about network topologies, features, technical data

Siemens Optical Link Modul 6GK1503-3CD00 OLM/G12-EEC V4.0

Produktinformationen "Siemens Optical Link Modul 6GK1503-3CD00 OLM/G12-EEC V4.0 PROFIBUS" PROFIBUS OLM/G12-EEC V4.0 Optical Link Module mit 1 RS-485 und 2 Glas-LWL- Schnittstellen (4

6GK1503-3CB00 SIEMENS PROFIBUS OLM/G12 V4.0

PROFIBUS OLM/G12 V4.0 Optical Link Module with 1 RS 485 and 2 glass FOC interfaces (4 BFOC sockets) for standard Distances up to 2850 m, with signaling

Siemens 6GK1503-2CB00 SIEMENS PB OLM/G11 V4.0 OPTICAL

This optical link module provides a reliable solution for extending PROFIBUS networks over glass fibre, enabling long-distance communication up to 3 km while maintaining high data rates up to 12 Mbit/s.

6GK1503-3CB00 Datasheet (PDF)

PROFIBUS OLM/G12 V4.0 Optical Link Module with 1 RS 485 and 2 glass FOC interfaces (4 BFOC sockets) for standard Distances up to 2850 m, with signaling contact and measuring output.

Silicon photonics and co-packaged optics at the heart of

While linear-drive pluggable modules remain competitive, CPO is expected to offer unmatched customization and scalability, with large-scale

AI Data Center Optical Transceiver Module Market 2025–2030

The AI data center optical transceiver market has entered a historic growth phase, driven by the exponential expansion of AI computing clusters and the accelerated migration from traditional copper

Key Differences Of 100G, 400G, And 800G Explained

optical modules with different rates have been launched one after another, among which 100G, 400G and 800G optical modules have become the

Google''s High-Speed Interconnect Architecture to Push 800G+ Optical ...

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Google''s next-generation TPU, Ironwood, integrates a 3D Torus network topology with the Apollo optical circuit switch (OCS) all-optical network, marking a major step forward in AI data

Optical module – A comprehensive exploration

The optical module is one of the core devices of the optical communication system, and its development has a vital impact on its related industrial chain. So, what is an optical module? How

A Comprehensive Look at the QSFP28-100G-ZR4 Optical Module

The QSFP28-100G-ZR4 optical transceiver is a high-performance module that delivers reliable data transfer across extended distances, with exceptional signal quality and reliability.

400G Optical Modules Explained: SR4 Vs. DR4 Vs. FR4 Vs. LR4

Key differences between SR4, DR4, FR4, and LR4 400G optical modules. Expert advice from Asterfusion engineers to optimize your data center network.

Source Photonics to Expand Optical Chip and Module Production

Source Photonics is one of the world''s leading optical communications suppliers, with operations spanning optical chip R&D, wafer manufacturing, packaging and testing, and optical

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

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